IN THE CLAIMS

1-44. (Canceled)

45. (Currently amended) A method of producing a non-human embryo, said method comprising introducing a nucleus from a neural stem cell (NSC) into an oocyte and allowing the oocyte to mature to the non-human embryo, wherein said non-human embryo is a rat embryo.

46. (Previously presented) The method according to claim 45 wherein the NSC is a fetal NSC (FNSC).

47. (Previously presented) The method according to claim 45 wherein the NSC is a telomerase catalytic component (TERT) NSC.

48. (Previously presented) The method according to claim 45 wherein the NSC is a telomerase catalytic component (TERT) FNSC.

49. (Previously presented) The method according to claim 45 wherein the NSC is capable of long term culture and is derived from a cellular composition prepared by a method comprising:

obtaining a source of neural stem cells;

preparing a suspension of cells from the source;

contacting the suspension of cells with a suitable medium to maintain the neural stem cells in a long term cell culture; and

culturing the cells in the long term culture, wherein said culturing comprises passaging and propagation of the cells.

50. (Previously presented) The method according to claim 49 wherein the long term culture is a period of 4 to 6 weeks.

51. (Previously presented) The method according to claim 49 wherein the source of the neural stem cell is a fetus differentiated at a stage after the embryonic stage.

52. (Previously presented) The method according to claim 51 wherein the source of the neural stem cell is a head or spinal cord of the fetus.

53. (Previously presented) The method according to claim 49 wherein the suitable medium includes at least one lipid and at least one mitogenic factor.

54. (Previously presented) The method according to claim 53 wherein the lipid is selected from the group consisting of cholesterol, triglycerides or phospholipids or a combination thereof.

55. (Previously presented) The method according to claim 53 wherein the mitogenic factor is selected from the group consisting of bFGF, EGF, PDGF or a combination of EGF and bFGF.

56. (Previously presented) The method according to claim 55 wherein the EGF is in the range of 2 to 20 ng/ml.

57. (Previously presented) The method according to claim 55 wherein the bFGF is in the range of 2 to 20 ug/ml.

58. (Previously presented) The method according to claim 53 wherein a chemically defined lipid concentrate is present in a ratio of 1:100.

59. (Previously presented) The method according to claim 53 wherein the media further includes a cell survival factor.

60. (Previously presented) The method according to claim 59 wherein the cell survival factor is selected from the group consisting of transferrin, insulin, growth factors including EGF, bFGF (FGF-2) or PDGF, lipids and selenium.

61. (Previously presented) The method according to claim 49 wherein the passaging and propagation of the cells is conducted when the cells bud from the cell culture.

62. (Previously presented) The method according to claim 45 wherein the NSC is genetically modified and wherein the genetic modification comprises inactivating, modifying or deleting a gene.

63-70. (Canceled)